

BACKGROUND MATERIAL

NASA FY 2001 BUDGET BRIEFING

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NOTE: There should be no premature release of this statement
nor should any of its contents be paraphrased or alluded
to in earlier stories.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

FY 2001 BUDGET SUMMARY
(Millions of Dollars)

	*FY 2000	FY 2001
HUMAN SPACE FLIGHT	5,467.7	5,499.9
SCIENCE, AERONAUTICS & TECHNOLOGY	5,580.9	5,929.4
MISSION SUPPORT	2,532.2	2,584.0
INSPECTOR GENERAL	20.0	22.0
TOTAL BUDGET AUTHORITY	13,600.8	14,035.3

***FY 2000 includes the .038 rescission and transfer
of \$20.2 million from HSF/Shuttle to MS/R&PM**

	FY 2000	FY2001
<i>HUMAN SPACE FLIGHT</i>	5,467.7	5,499.9
<u>SPACE STATION</u>	<u>2,323.1</u>	<u>2,114.5</u>
VEHICLE	890.1	442.6
OPERATIONS CAPABILITY	763.6	826.5
RESEARCH	394.4	455.4
RUSSIAN PROGRAM ASSURANCE	200.0	300.0
CREW RETURN VEHICLE	75.0	90.0
<u>SPACE FLIGHT OPERATIONS (SPACE SHUTTLE)</u>	<u>2,979.5</u>	<u>3,165.7</u>
SAFETY AND PERFORMANCE UPGRADES	488.8	
(Construction of Facilities included)	[11.0]	
SHUTTLE OPERATIONS	2,490.7	
FLIGHT HARDWARE		2,005.9
GROUND OPERATIONS		551.8
FLIGHT OPERATIONS		273.6
PROGRAM INTEGRATION		334.4
(Construction of Facilities included)		[15.5]
<u>PAYLOAD & UTILIZATION OPERATIONS</u>	<u>165.1</u>	
PAYLOAD CARRIERS AND SUPPORT	49.3	
EXPENDABLE LAUNCH VEHICLE MISSION SUPPORT	30.6	
(Construction of Facilities included)	[2.2]	
ENGINEERING AND TECHNICAL BASE	85.2	
<u>PAYLOAD AND ELV SUPPORT</u>		<u>90.2</u>
PAYLOAD CARRIERS AND SUPPORT		57.0
EXPENDABLE LAUNCH VEHICLE MISSION SUPPORT		33.2
(Construction of Facilities included)		[0.8]
<u>INVESTMENTS AND SUPPORT</u>		<u>129.5</u>
ROCKET PROPULSION TEST SUPPORT		28.0
ADDITIONAL FUNDING FOR ACADEMIC PROGRAMS		8.0
TECHNOLOGY AND COMMERCIALIZATION		20.0
ENGINEERING AND TECHNICAL BASE		73.5

	FY 2000	FY 2001
SCIENCE, AERONAUTICS & TECHNOLOGY	5,580.9	5,929.4
<u>SPACE SCIENCE</u>	<u>2,192.8</u>	<u>2,398.8</u>
CHANDRA X-RAY OBSERVATORY	4.1	
RELATIVITY MISSION (GP-B)	49.9	13.8
HST DEVELOPMENT	160.1	168.1
STRATOSPHERIC OBSERVATORY FOR INFRARED ASTRONOMY (SOFIA)	39.0	33.9
SPACE INFRARED TELESCOPE FACILITY (SIRTF)	123.4	117.6
THERMOSPHERE, IONOSPHERE, MESOSPHERE ENERGETICS & DYNAMICS (TIMED)	27.5	
PAYLOADS	13.6	7.1
EXPLORER DEVELOPMENT	122.3	138.8
MARS SURVEYOR PROGRAM	248.4	326.7
DISCOVERY	154.8	196.8
MISSION OPERATIONS	75.4	80.0
SUPPORTING RESEARCH & TECHNOLOGY	1,179.3	1,302.8
ADDITIONAL FUNDING FOR ACADEMIC PROGRAMS	[10.2]	13.2
UNDISTRIBUTED REDUCTION	-5.0	
<u>LIFE & MICROGRAVITY SCIENCES & APPLICATIONS</u>	<u>274.7</u>	<u>302.4</u>
ADVANCED HUMAN SUPPORT TECHNOLOGY	30.2	30.9
BIOMEDICAL RESEARCH & COUNTERMEASURES (Construction of Facilities)	57.2	76.9
	[9.0]	[8.5]
FUNDAMENTAL BIOLOGY	38.2	39.2
MICROGRAVITY RESEARCH	108.8	129.3
HEALTH RESEARCH	8.7	11.3
SPACE PRODUCTS DEVELOPMENT	14.4	13.6
MISSION INTEGRATION	17.2	0.2
ADDITIONAL FUNDING FOR ACADEMIC PROGRAMS	[1.0]	1.0

	FY 2000	FY 2001
<u>EARTH SCIENCE</u>	<u>1,443.4</u>	<u>1,405.8</u>
EARTH OBSERVING SYSTEM (EOS)	575.4	
EARTH OBSERVING SYSTEM DATA INFORMATION SYSTEM	261.9	
EARTH PROBES	157.4	
APPLIED RESEARCH & DATA ANALYSIS	436.5	
GLOBAL OBSERVATIONS TO BENEFIT THE ENVIRONMENT	5.0	
CONSTRUCTION OF FACILITIES	1.0	
SHUTTLE RADAR TOPOGRAPHY MISSION	6.2	
<u>MAJOR DEVELOPMENT</u>		<u>819.5</u>
EARTH OBSERVING SYSTEM		447.1
EARTH OBSERVING SYSTEM DATA INFORMATION SYSTEM		252.0
EARTH PROBES (includes SRTM)		120.4
<u>RESEARCH AND TECHNOLOGY</u>		<u>533.3</u>
EARTH SCIENCE PROGRAM SCIENCE		353.2
APPLICATIONS, COMMERCIALIZATION AND EDUCATION		69.2
TECHNOLOGY INFUSION		110.9
<u>MISSION OPERATIONS</u>		<u>42.7</u>
<u>ADDITIONAL FUNDING FOR ACADEMIC PROGRAMS</u>	<u>[7.3]</u>	<u>10.3</u>

	FY 2000	FY 2001
AERO-SPACE TECHNOLOGY	1,124.9	1,193.0
<u>RESEARCH & TECHNOLOGY BASE</u>	<u>581.7</u>	<u>539.4</u>
Information Technology	77.9	115.8
Vehicle System Technology	157.5	136.3
Propulsion & Power	76.3	75.5
Flight Research	70.7	81.0
Operations Systems	17.0	17.5
Rotorcraft	26.9	26.7
Space Transfer & Launch Technology	136.5	70.6
Construction of Facilities	11.7	16.0
Additional Funding for Academic Programs	7.2	[11.2]
<u>FOCUSED PROGRAMS</u>	<u>403.2</u>	<u>507.4</u>
High-Performance Computing and Communications	24.2	24.2
Aviation System Capacity	62.9	59.2
Aviation Safety	64.4	70.0
Ultra Efficient Engine Technology	68.3	35.0
Small Air Transport System		9.0
Quiet Aircraft Technology Program		20.0
2nd Generation RLV Focused		235.0
Pathfinder Technology Demonstrations	31.3	37.1
X-33 Advanced Technology Demonstrator	111.6	
X-34 Technology Demonstration	40.5	17.9
<u>Additional Funding for Academic Programs</u>	<u>[7.2]</u>	<u>11.2</u>
<u>COMMERCIAL TECHNOLOGY PROGRAM</u>	<u>140.0</u>	<u>135.0</u>
Commercial Programs	35.0	29.2
Technology Transfer Agents	7.4	5.8
Small Business Innovative Research Programs	97.6	100.0

	FY 2000	FY 2001
<u>MISSION COMMUNICATION SERVICES</u>	<u>406.3</u>	<u>*</u>
GROUND NETWORKS	162.0	
MISSION CONTROL & DATA SYSTEMS	233.8	
SPACE NETWORK CUSTOMER SERVICES	10.5	
<u>SPACE OPERATIONS</u>		<u>529.4</u>
OPERATIONS		329.8
MISSION AND DATA SERVICE UPGRADES		106.2
TDRSS REPLENISHMENT PROJECT		55.0
TECHNOLOGY		38.4
<u>ACADEMIC PROGRAMS</u>	<u>138.8</u>	<u>100.0</u>
EDUCATION PROGRAMS	85.0	54.1
MINORITY UNIVERSITY RESEARCH & EDUCATION	53.8	45.9
(Additional funding for Academic Programs not included above)	[28.8]	[43.7]

***Funding has been transferred to Space
Operations**

	FY 2000	FY 2001
MISSION SUPPORT	2,532.2	2,584.0
<u>SAFETY, MISSION ASSURANCE, ENGINEERING AND ADVANCED CONCEPTS</u>	<u>43.0</u>	<u>47.5</u>
<u>SPACE COMMUNICATION SERVICES</u>	<u>89.7</u>	*
SPACE NETWORK	36.1	
TELECOMMUNICATIONS	53.6	
<u>RESEARCH & PROGRAM MANAGEMENT</u>	<u>2,217.6</u>	<u>2,290.6</u>
<u>CONSTRUCTION OF FACILITIES</u>	<u>181.9</u>	<u>245.9</u>
INSPECTOR GENERAL	20.0	22.0

*Funding has been transferred to SAT/Space
Operations

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
DISTRIBUTION OF WORKYEARS BY INSTALLATION
FY 2001 BUDGET SUMMARY**

	FY 2000	FY 2001
JOHNSON SPACE CENTER	2,926	3,030
KENNEDY SPACE CENTER	1,806	1,825
MARSHALL SPACE FLIGHT CENTER	2,651	2,758
STENNIS SPACE CENTER	272	280
AMES RESEARCH CENTER	1,457	1,486
DRYDEN FLIGHT RESEARCH CENTER	634	634
LANGLEY RESEARCH CENTER	2,382	2,387
GLENN RESEARCH CENTER	1,983	1,972
GODDARD SPACE FLIGHT CENTER	3,282	3,282
HEADQUARTERS	1,020	1,087
TOTAL, FULL-TIME PERMANENT WORKYEARS	18,413	18,741
 INSPECTOR GENERAL	 210	 213

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
CONSTRUCTION OF FACILITIES BY APPROPRIATION
FY 2001 BUDGET SUMMARY
(Millions of Dollars)**

	FY 2000	FY 2001
<u>HUMAN SPACE FLIGHT</u>	13.2	16.3
<u>SPACE FLIGHT OPERATIONS (SPACE SHUTTLE)</u>	<u>11.0</u>	<u>15.5</u>
Repair Payload Changeout Room, Pad B (KSC)		2.3
Repair and Upgrade Substations 20A/20B (MAF)		1.8
Refurbish Elevator Controls, Vehicle Assembly Building (KSC)	2.3	
Restore Pad Surfaces and Slopes, Pad B (KSC)	1.8	
Rehabilitate 480V Electrical Distribution System, ET Manufacturing Bldg (MAF)	1.8	
Minor Revitalization of Facilities at Various Locations, Not in excess of \$1,500,000 per project	2.4	8.6
Facility Planning and Design	2.7	2.8
<u>PAYLOAD AND ELV SUPPORT</u>	<u>2.2</u>	<u>0.8</u>
Minor Revitalization of Facilities at Various Locations, Not in excess of \$1,500,000 per project	2.2	0.8
<u>SCIENCE, AERONAUTICS, AND TECHNOLOGY</u>	24.2	37.5
<u>SPACE SCIENCE</u>	<u>2.5</u>	<u>13.0</u>
Construct Laboratory for In-Situ Microbiology (JPL)		13.0
Construct Optical Interferometry Development Laboratory (JPL)	2.5	
<u>LIFE AND MICROGRAVITY SCIENCE AND APPLICATIONS</u>	<u>9.0</u>	<u>8.5</u>
Construct Booster Application Facility, Brookhaven National Laboratory, Phase 4	9.0	8.5
<u>EARTH SCIENCE</u>	<u>1.0</u>	
Restore Meteorological Development Laboratory (GSFC)	1.0	
<u>AERO-SPACE TECHNOLOGY</u>	<u>11.7</u>	<u>16.0</u>
Replace Fan Blades, National Full-scale Aerodynamic Complex, Phase 3 (ARC)	3.4	6.0
Replace Main Drive for 14x22-Foot Subsonic Tunnel (LaRC)	7.3	
Construct Rocket Based Combined Cycle (RBCC) Facility (Phase I)	1.0	10.0

	FY 2000	FY 2001
<u>MISSION SUPPORT</u>	<u>181.9</u>	<u>245.9</u>
<u>AMES RESEARCH CENTER</u>	<u>2.7</u>	<u>9.0</u>
Restore Electrical Distribution System	2.7	9.0
<u>GLENN RESEARCH CENTER</u>	<u>7.6</u>	<u>11.9</u>
Modification to Distributed Control System		3.0
Provide 34.5kV Alternate Feed to Substation G		4.5
Repair Sanitary Sewer System		4.4
Rehabilitate High Voltage System	7.6	
<u>GODDARD SPACE FLIGHT CENTER</u>	<u>6.8</u>	<u>9.0</u>
Repair Site Steam Distribution System	2.9	4.0
Restore Chilled Water Distribution System	3.9	5.0
<u>JET PROPULSION LABORATORY</u>	<u>3.4</u>	<u>3.7</u>
Replace Chillers, Space Flight Operations Facility		1.8
Upgrade 34M Beam Waveguide Antenna Subnet for KA-Band, Network		1.9
Upgrade 70M Antenna Servo Drive, 70M Antenna Subnet	3.4	
<u>JOHNSON SPACE CENTER</u>	<u>5.6</u>	<u>2.5</u>
Rehabilitate Electrical Distribution System, 200 Area, WSTF		2.5
Rehabilitate Utility Tunnel Structure and Systems	5.6	
<u>KENNEDY SPACE CENTER</u>	<u>7.3</u>	<u>23.8</u>
Construct Operations Support Building, Hypergol Maintenance Facility		3.3
Construct Operations Support Building, Pad B		4.0
Construct Operations Support Building II, LC-39 Area		13.0
Repairs to Primary Electrical Power System		3.5
Connect KSC to CCAS Wastewater Treatment Plant	2.5	
Rehabilitate High Pressure Storage System, LC-39	3.4	
Replace High Voltage Load Break Switches	1.4	
<u>LANGLEY RESEARCH CENTER</u>	<u>10.0</u>	<u>9.0</u>
Repairs to Electrical Systems, East and West Areas		9.0
Replace Air Storage Field, 8-FT High Temperature Tunnel	10.0	
<u>MARSHALL SPACE FLIGHT CENTER</u>		<u>10.8</u>
Repair and Modernize Fluid Dynamics Vacuum Pump Facility		2.6
Replace Roof, Building 4705		2.4
Replace Mechanical Equipment and Roof, Building 350		5.8

	FY 2000	FY 2001
<u>WALLOPS FLIGHT FACILITY</u>		<u>2.7</u>
Repair Storm Drainage System		2.7
<u>DRYDEN FLIGHT RESEARCH CENTER</u>	<u>2.9</u>	
Rehabilitate Hangar, Building 4802	2.9	
<u>MICHOUD ASSEMBLY FACILITY</u>	<u>2.0</u>	
Repair Roofs, Vehicle Component Supply Buildings	2.0	

	FY 2000	FY 2001
MINOR REVITALIZATON OF FACILITIES AT VARIOUS LOCATIONS NOT IN EXCESS OF \$1,500,000 PER PROJECT	79.3	106.8
FACILITY PLANNING & DESIGN	14.2	15.7
ENVIRONMENTAL COMPLIANCE & RESTORATION	40.1	41.0